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Privacy Statement -

DOCUMENT-IDENTIFIER: US 4658082 A TITLE: Method for producing intact plants containing foreign DNA	
KWIC	

DEPR:

Small amounts of plant DNA were isolated as follows: About 1 g of washed leaves

was frozen in liquid nitrogen, ground to a powder with a mortar and pestle, transferred to a tube and then thawed in the presence of 4 ml lysis buffer (7 M guanidine HCl, 2% SARKOSYL, 20 mM EDTA, 20 mM Tris HCl, pH 8.0) (SARKOSYL, TM

for SIGMA Chemical Co., St. Louis, Mo. 63178). After 1 hour at 55.degree. C., 0.8 ml of water was added and the tube was spun at 4.degree. C. for 20 min. at 20,000 rpm in a Sorvall SS34 rotor. The supernatant was brought to 5 ml with lysis buffer (4 vol. diluted with 1 vol. water) and then layered on a CsCl two step gradient. The CsCl steps were 3 ml each. They contained 20 mM Tris-HCl, pH 8.0 and 0.5 mg/ml ethidium bromide; they had a density of either 1.35 or 1.6 g/cc. The gradients were spun at 20.degree. C. for at least 16 hr. at 38,000 rpm in a Beckman SW41 rotor. The band of DNA, which was visible

with ultraviolet light at the interface between the steps, was removed. The DNA was extracted several times with isoamyl alcohol to remove the ethidium bromide. It was precipitated with isopropanol and with ethanol, and then resuspended in 50 microliters 1 mM EDTA and 10 mM Tris-HCl, pH 8.0. Isolation

of larger amount of DNA will be performed essentially as described by White, et al. (1982).

CLIPPEDIMAGE= JP403091490A

PAT-NO: JP403091490A

DOCUMENT-IDENTIFIER: JP 03091490 A

TITLE: EXTRACTION OF ACTIVE COMPONENT OF GINKGO LEAF AND

PRODUCTION OF

GLYCOSIDE EXTRACT OF ACTIVE COMPONENT OF GINKGO LEAF

PUBN-DATE: April 17, 1991

INVENTOR-INFORMATION:

NAME

TAKANE, YOSHIHARU

ASSIGNEE-INFORMATION:

NAME COUNTRY

TAKANE YOSHIHARU N/A

APPL-NO: JP01228638

APPL-DATE: September 4, 1989

INT-CL (IPC): C12P019/18; A61K035/78; C07G003/00

US-CL-CURRENT: 435/97

ABSTRACT:

PURPOSE: To produce an easily absorbable glycoside extract of ginkgo leaf in improved extraction efficiency by extracting ginkgo leaf with water or a water/ethanol mixture and carrying out sugar transfer of a water-insoluble component of the extracted liquid or a liquid containing dried extract using a specific sugar-transfer method.

CONSTITUTION: Dried and roughly crushed green leaf of ginkgo is extracted with

water or a water/ethanol mixture under heating to extract the water-soluble active component. The extracted liquid is mixed with a partial hydrolyzate of starch such as dextrin and glycosidase or trans-glycosidase having the activity to transfer the glucose group of the partial hydrolyzate of starch. The active component scarcely soluble or insoluble in water is subjected to the sugar transfer to a water-soluble glycoside and the glycoside is dissolved in the extracted liquid by this procedure. The dried extract is added to the extracted liquid and subjected to the process similar to the above process and the dissolved glycoside produced by this process is separated, purified and

concentrated by conventional process to obtain the extract of the glycoside. The extraction efficiency of the active component can be improved and an easily absorbable glycoside having high absorption efficiency in living body can be produced by this process.

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TTL:

Ginkgo Bilboa flavonoid extract which is terpene-free and has a high flavonoid heteroside content

ABPL:

The invention concerns a Ginkgo biloba leaf flavonoid extract and more specifically an extract which is terpene free and/or has a high flavonoid heteroside content. The invention also concerns a flavoring compound containing such an extract and the use of this extract as a flavoring ingredient. The invention finally concerns a process for obtaining a substantially terpene-free Ginkgo biloba leaf flavonoid extract.

BSPR:

The invention concerns a flavonoid extract of Ginkgo biloba and more specifically an extract either substantially free of terpenes or with a high content of flavonoid heterosides, or free of terpenes and with a high content of flavonoid heterosides. This extract may advantageously be used as a flavoring agent. The invention likewise concerns a flavoring composition comprising such an extract and the use of this extract as a flavoring ingredient.

BSPR:

Applications of extracts of Ginkgo biloba in the field of medicine and cosmetics are well known. The extract EGb-761 is perhaps the best known in the

medical field (The extract of Ginkgo biloba [EGb-761], La Press Medicale, 1986, Vol. 31, Special Number, Masson Publishing Co.). This extract primarily includes two families of substances: the flavonoid and terpene substances. New extracts were defined which, in an unexpected way, modify the organoleptic [sensory] properties of certain foods such as drinks, dairy products, [and] sweets.

BSPR:

One of the aspects of the present invention therefore has as its object extracts which do not comprise any or only a small quantity of terpenes

(ginkgolides and bilobalides) which have a high degree of therapeutic activity. Moreover, it has been found to be of interest to obtain extracts enriched with flavonoid substances: these are essentially the mono-, di-, and tri-glucosides of Kaempferol, of Quercetine, and of Isorhamnetine with glucose and with rhamnose.

BSPR:

The invention also has as its object a flavonoid extract of Ginkgo biloba leaves free of terpenes. This means that the extract comprises flavonoid heterosides and small quantities of terpenes or no terpenes. If the extract comprises terpenes, the terpene content is a maximum of 1%, preferably a maximum of 0.5%.

BSPR:

The invention likewise has as its object a flavonoid extract with a high flavonoid heteroside content. This means that the extract comprises from 28 to 35% flavonoid heterosides, and preferably 28 to 32%. Such extracts are obtained preferably from the cut leaves of young Ginkgo biloba trees.

BSPR:

A flavonoid extract with a high content of flavonoid heterosides may be obtained by extraction under partial vacuum with an acetone-water mixture. After stages of delipidation, elimination of undesirable substances with various solvents and by precipitation, the extract solution is concentrated and the extract is dried in vacuo.

BSPR:

The invention likewise has as its object a procedure for preparing an extract free of terpenes as defined above. This procedure includes several extraction stages of extract of Ginkgo biloba leaves with solvents, characterized in that one of the extraction stages is a deterpenation stage and the solvent used is a compound of formula RC(O)OR' in which R and R' represent independently a lower

alkyl alone or mixed with a saturated aliphatic hydrocarbon comprises at least 5 carbon atoms. The extraction stage may be effected at any stage of the process. The solvent used during the determination stage comprises preferably from 0 to 20% saturated aliphatic compound.

BSPR:

The invention likewise has as its object a procedure for preparing an extract enriched with flavonoid heterosides as defined above. This procedure includes several stages of extraction from the leaves of Ginkgo biloba with solvents, characterized in that one of the extraction stages is a stage of enrichment with flavonoid heterosides and that the solvent used, in a minimum quantity, is

an alcohol, alone or mixed with a ketone, preferably acetone. The extraction stage may be carried out at any stage of the procedure. The alcohol used is preferably a lower alcohol such as methanol, ethanol, propanol, [or] butanol, and preferably butanol. The amount of solvent used may be from 3 to 12 parts, and preferably in the lower portion of this range.

DEPR:

The leaves of Ginkgo biloba are extracted with 6 to 12 parts (preferably 8) of water comprising 60% acetone at 50-60 degrees C. and the solution is concentrated so as to reduce the percentage of acetone to less than 3%. This solution is cooled and the lipids are eliminated by decantation. The aqueous solution is extracted with 2 to 5 parts of ethyl acetate comprising 0 to 20% heptane. The resulting solution is extracted with a minimum amount of an acetone-butanol mixture (0 to 15% acetone) in the presence of ammonium sulfate

The organic phase is concentrated; after adding ethanol, the solution is again concentrated. After a new dilution with ethanol, the solution is cooled and the insoluble precipitates are filtered out. The resulting solution is concentrated, dried, and finally pulverized to recover the flavonoid extract in the form of a homogeneous powder.

CLPR:

1. A flavonoid extract from the leaves of the Ginkgo biloba, containing at most 1% of terpenes and 28 to 35% by weight of flavonoid heterosides.

CLPR:

4. A process for preparing an extract as defined in claim 1, comprising extracting several times the leaves of the Ginkgo biloba with solvents, wherein one of the extraction stages is a deterpenation stage using a solvent of formula RC(O)OR' in which R and R' are individually lower alkyl, alone or mixed with a saturated aliphatic hydrocarbon of 1 to 5 carbon atoms.

DERWENT-ACC-NO: 2001-590348

DERWENT-WEEK: 200167

\~4~COPYRIGHT 1999 DERWENT INFORMATION LTD\~14~ TITLE: Conversion of ginkgo rooting and establishment of clone

INVENTOR: SUN. T.

PRIORITY-DATA: 1997CN-0109154 (June 27, 1997)

PATENT-FAMILY:

PUB-NO PUB-DATE LANGUAGE PAGES MAIN-IPC CN 1167153 A December 10, 1997 N/A 000 C12N 015/82

INT-CL (IPC): C12N005/10; C12N015/74; C12N015/82

ABSTRACTED-PUB-NO: CN 1167153A

BASIC-ABSTRACT: NOVELTY - The present invention discloses a conversion of

ginkgo developed root and its pure-clonic propagation formation. It uses ginkgo leaf and root bark as raw material, and uses activated root-developing farm Bacillus to make conversion to integrate T-DNA of root-developing farm Bacillus Ri plasmid into ginkgo cell nucleus DNA to form hair-like root, and then by means of multi-generation culture and screening the obtained hair-like root progressively forms the ginkgo root-developing suspension culture pure-clonic propagation system. The ginkgo developed root can be used as a new

ginkgo resource, and can be cultured by adopting industrial production mode, and can be used for extracting medicinal components of natural ginkgo. CHOSEN-DRAWING: Dwg.0/0